

Listing of the Claims:

1. (Original) A method for quantitative and qualitative determination of human papillomavirus (HPV) in a sample comprising the steps of:

i) providing a sample from a patient suspected to be infected by HPV, and optionally extracting the nucleic acid of the sample;

ii) dividing the sample or nucleic acid from the sample in two or more sub-samples;

iii) measuring, simultaneously, the presence and amount of two or more viruses in one of said sub-samples by using a specific primer for amplification of each virus or group of viruses, whereby the primers are designed not to compete during the amplification-reaction, and a specific probe for each virus or group of viruses, whereby the probes are designed not to compete during the amplification-reaction and the detection phase;

iv) determining the amount of said sample by analysis of a nuclear gene in a given amount of another of said sub-samples in a separate amplification reaction; and

v) calculating the amount of each virus or group of viruses per amount of sample from the results of steps iii) and iv).

2. (Original) A method according to claim 1, wherein the amplifications in steps iii) and iv) are PCR amplification.

3. (Previously Presented) A method according to claim 1, which is a PCR-based fluorescent 5' exonuclease assay.

4. (Previously Presented) A method according to claim 1, wherein the viruses in step iii) are selected from the group consisting of HPV 16, 18, 31, 33, 35, 39, 45, 52, and 58.
5. (Previously Presented) A method according to claim 1, wherein HPV 16, 31, 18, 45 is detected and quantified in one sub-sample and optionally HPV 33, 35, 39, 52, and 58 is detected and quantified in another sub-sample.
6. (Previously Presented) A method according to claim 1, wherein the amount of a human single copy gene is detected and quantified in step iv).
7. (Original) A method according to claim 6, wherein the gene is HUMPBGDA, Homo sapiens hydroxymethylbilane synthase gene, accnr M95623.1.
8. (Previously Presented) A method according to claim 1, which is for detection and diagnose of cervical cancer.
9. (Currently Amended) A kit for detection and quantification of human papillomavirus, comprising a) the seven amplification primers SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5/SEQ ID NO:6, SEQ ID NO:7 and SEQ ID NO:8, and the three probes SEQ ID NO:21, SEQ ID NO:22 and SEQ ID NO:23/SEQ ID NO:24, for HPV 16, 31, 18, 45 according to Table 1 and 2 of the specification; and optionally b) eight the amplification primers SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13/SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16 and SEQ ID

NO:17/SEQ ID NO:18 and ~~three~~ the probes SEQ ID NO:25, SEQ ID NO:26 and SEQ ID NO:27/SEQ ID NO:28/SEQ ID NO:29 for HPV 33, 35, 39, 52, and 58, ~~according to Table 1 and 2 of the specification.~~

10. (Currently Amended) A kit according to claim 9, further comprising c) the ~~two~~ amplification primers SEQ ID NO:19 and SEQ ID NO:20 and the ~~one~~ probe SEQ ID NO:30, ~~according to Table 1 and 2 of the specification~~, for detection and quantification of the amount of a human single copy gene.

11. (Original) A kit according to claim 10, wherein the gene is HUMPBGDA, Homo sapiens hydroxymethylbilane synthase gene, accnr M95623.1.

12. (Previously Presented) A kit according to claim 9, further comprising d) at least two different fluorophores.

13. (Currently Amended) A kit according to claim ~~10~~ 9, further comprising a) ~~seven amplification primers and three probes for HPV 16, 31, 18, 45 according to Table 1 and 2 of the specification; b) eight amplification primers and three probes for HPV 33, 35, 39, 52, and 58, according to Table 1 and 2 of the specification; c) two amplification primers and one probe, according to Table 1 and 2 of the specification, for detection and quantification of the amount of a human single copy gene; and d) three different~~ fluorophores.

14. (Previously Presented) A kit according to claim 9 for detection and diagnose of cervical cancer.
15. (Previously Presented) A method according to claim 2, which is a PCR-based fluorescent 5' exonuclease assay.
16. (Previously Presented) A method according to claim 2, wherein the viruses in step iii) are selected from the group consisting of HPV 16, 18, 31, 33, 35, 39, 45, 52, and 58.
17. (Previously Presented) A method according to claim 3, wherein the viruses in step iii) are selected from the group consisting of HPV 16, 18, 31, 33, 35, 39, 45, 52, and 58.
18. (Previously Presented) A kit according to claim 10, further comprising d) at least two different fluorophores.
19. (Previously Presented) A kit according to claim 11, further comprising d) at least two different fluorophores.
20. (Previously Presented) A kit according to claim 11 for detection and diagnose of cervical cancer.